Overview of Alternative Fuel Vehicle Made Available Data, 2000

Based on published data Tables 14 through 18
U.S. Department of Energy
Energy Information Administration

Website location: http://www.eia.doe.gov/fuelalternate.html

All data derived from the Form EIA-886

"Alternative Transportation Fuels & Alternative Fueled Vehicles Annual Survey"

Form & Instructions link: http://www.eia.doe.gov/cneaf/alternate/page/forms.html

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EIA's Revised Vehicle Classifications

Automobiles (sedans, station wagons, mini- and sub-compacts, and special purpose)

Vans (passenger vans and cargo vans)

Buses (school, transit, and intercity buses)

Light Duty Trucks (pickups and other trucks in weight class up to 8,500 lbs)

Medium Duty Trucks (pickups and other trucks in weight class 8,501 to 16,000 lbs)

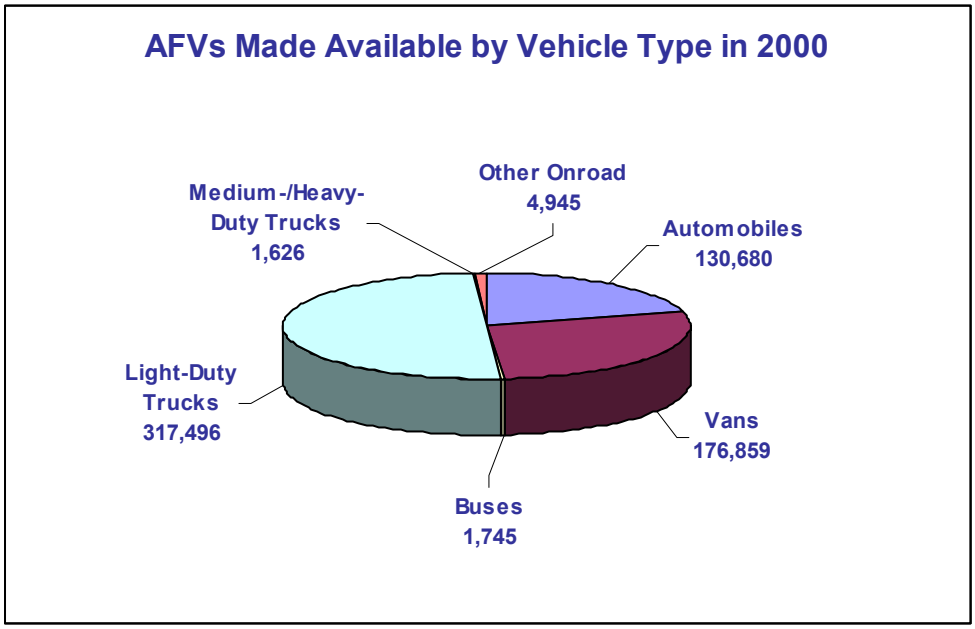
Heavy Duty Trucks (trucks in weight class of 16,001 lbs and over)

Other Onroad (motorcycles and neighborhood vehicles)

Notes : EIA no longer publishes data on the type of Aftermarket Vehicle Conversion (i.e., engine converted, repowered, replaced, modified, or rebuilt). Previously, these data were presented in *Table 18. Number of Onroad Alternative-Fueled Vehicles Converted, by Conversion Type.* This data table no longer exists.

Alternative Fueled Vehicles Made Available

From 1999 to 2000, EIA's survey of AFV suppliers showed a 41% increase in production of AFVs (those made available in calendar year 2000).



Source: Tables 14 and 17.

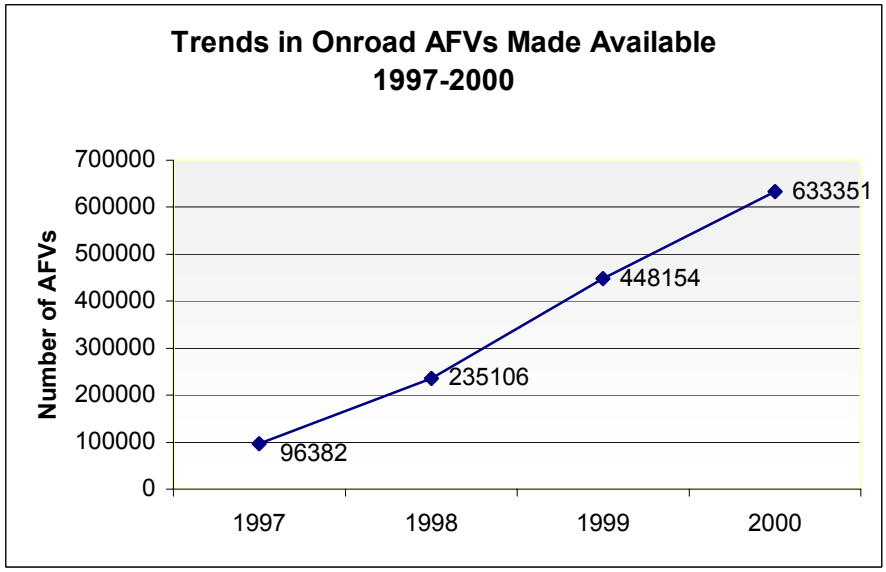
Many factors affect the increasing demands for onroad alternative fueled vehicles. The Energy Policy Act of 1992 (EPACT) and the Executive Order 13149 provide incentives and laws for federal, state, and fuel providers to increase the use of AFVs in their fleets each year, thus causing a demand in AFV production.

For more information on efforts to increase AFV usage in the United States, visit www.fleets.doe.gov

Made Available data are calculated by combining the total number of vehicles supplied by Original Equipment Manufacturers and those supplied by Aftermarket Vehicle Converters.

Other Onroad vehicles include motorcycles and low-speed neighborhood electric vehicles.

Since 1997, Onroad AFV production has continuously increased. The average annual percent change from 1997 to 2000 ranges between 40% and 100% each year.



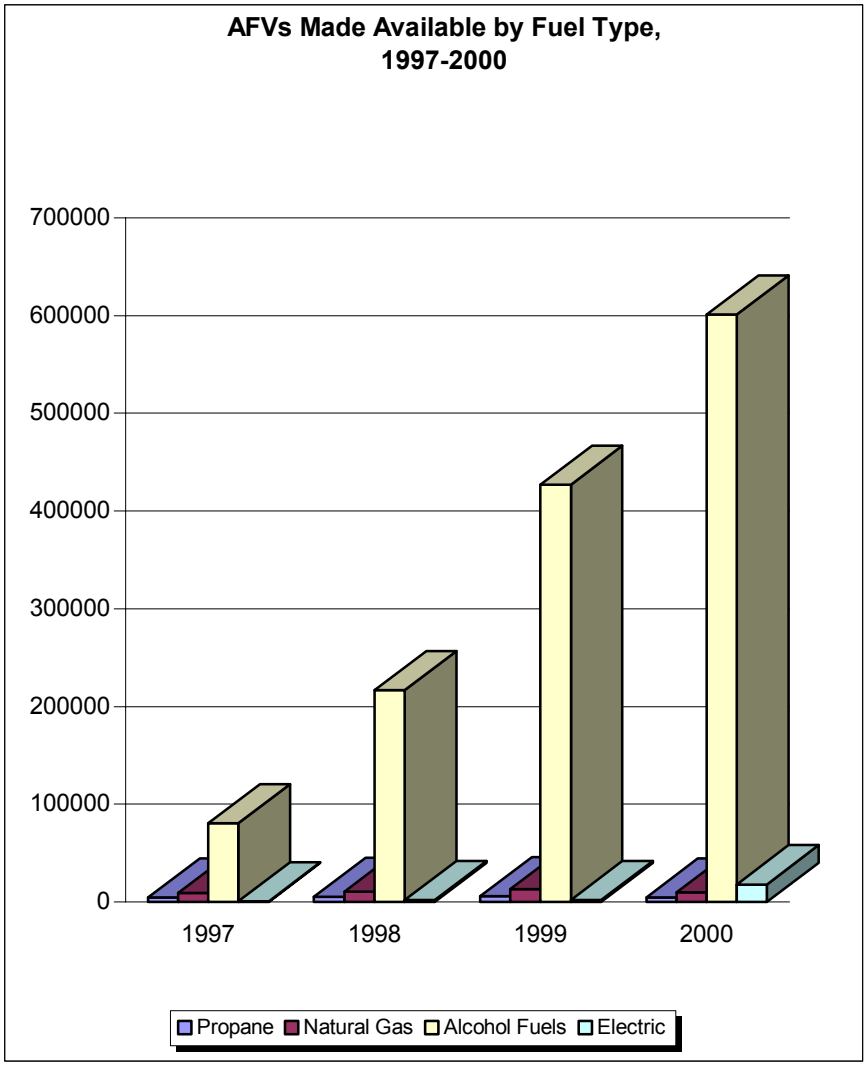
Source: Table 17 and historical data

Based on data collected in 2001 from original equipment manufacturers, there were between 60 and 70 different models of onroad vehicles capable of operating on alternative transportation fuels manufactured during calendar year 2000.

Conversion facilities are responsible over the years for converting hundreds of different models of onroad vehicles to operate on alternative transportation fuels.

Alternative Fueled Vehicles Made Available

A four-year comparison in AFVs made available by fuel type reveals dramatic changes in growth, especially in the area of alcohol-based fuels.



	1997	1998	1999	2000
Propane	4958	5620	5955	4435
Natural Gas	9446	10601	13465	9912
Alcohol Fuels	80895	217034	426724	600832
Electric	1083	1851	2010	18172

Source: Table 14, see website for historical data.

The rate of growth with alcohol-based fuels, predominantly Ethanol (85%), has risen exponentially since 1997.

One caveat to these high figures for alcohol-fueled vehicles is that EPACT only requires the use of a vehicle capable of operating on an alternative transportation fuel to meet the mandates; EPACT does not require consumption of the alcohol/gasoline blends in these flexible-fueled vehicles. Consequently, many E85 sedans, trucks, and vans are not actually using the alternative fuel.

While almost every state and the District of Columbia use E85-capable vehicles, only about 30% report E85 fuel consumption.

In addition, there are no present requirements on the amount of alternative transportation fuels used in bi-fueled vehicles (those capable of operating on either an alternative fuel or a conventional fuel like diesel or gasoline).

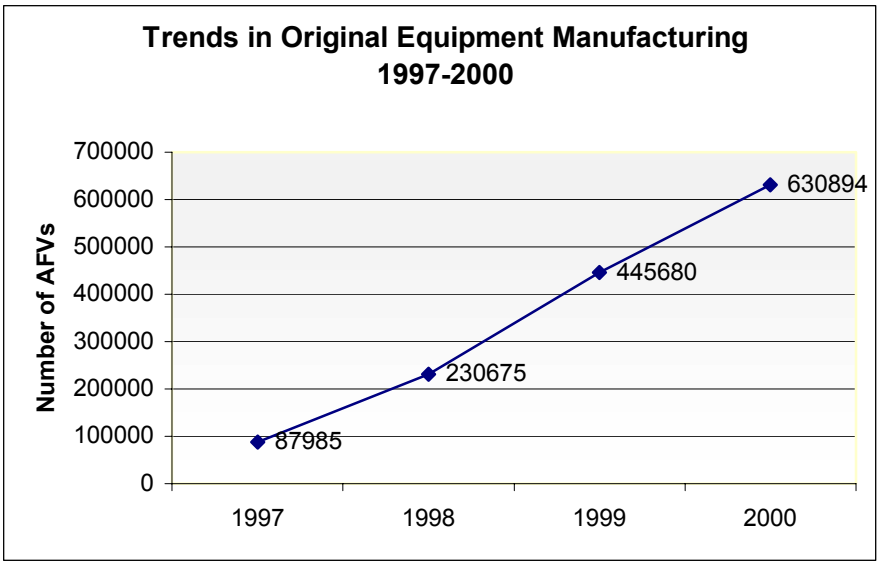
Due to the introduction of electric hybrid vehicles and low-speed neighborhood electric vehicles, AFVs in the electric category have increased by approximately 800%.*

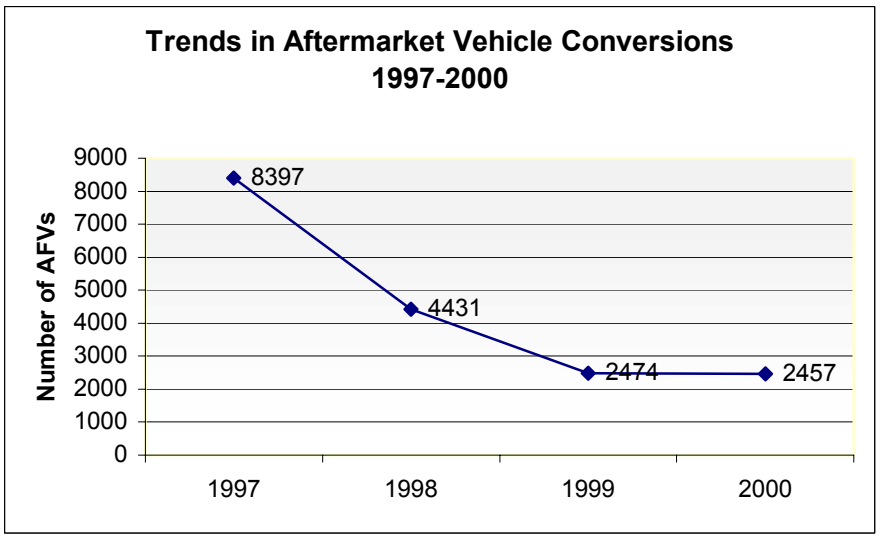
Natural Gas includes compressed natural gas and liquefied natural gas.

** EIA's data include gasoline/electric hybrid vehicles which are outside EPACT's definition of alternative fueled vehicle.*

Alternative Fueled Vehicles Made Available

Trends in Original Equipment Manufacturing and Aftermarket Vehicle Conversions can be seen in the four-year comparisons shown below.





Source: Table 17

Industry trends reflect continual decreases in Aftermarket Vehicle Conversions while the numbers of vehicles supplied by Original Equipment Manufacturers increase.

One major law affecting the conversion industry is the Environmental Protection Agency's Memorandum 1A.

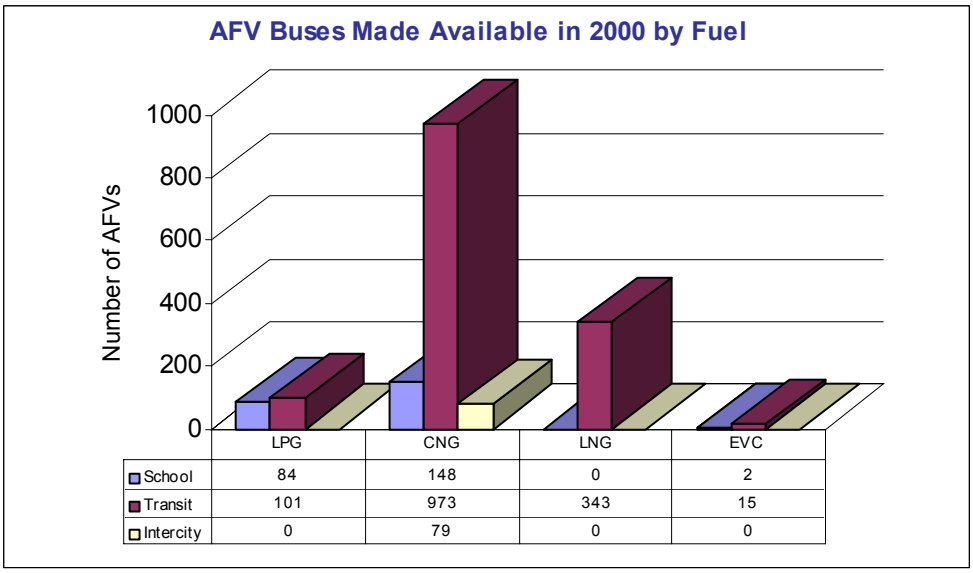
A brief overview:

The U.S. Environmental Protection Agency (EPA) regulates alternative fuel vehicle conversions, as well as other vehicle modifications, under the anti-tampering provisions of the Clean Air Act. The EPA issued Mobile Source Enforcement Memorandum 1A in 1974 to define this anti-tampering policy. On Sept. 4, 1997, the EPA issued an Addendum to Mobile Source Enforcement Memorandum 1A to redefine its tampering policy for alternative fuel conversions. Then, on June 1, 1998, the EPA issued a Revision to the Addendum to Mobile Source Enforcement Memorandum 1A. The Clean Air Act made it illegal for anyone to remove or render inoperative any motor vehicle emission control device or design element. Such tampering is prohibited both before and after a vehicle is purchased. The EPA's primary objective is to ensure that emission control systems are unimpaired for the useful life of the vehicle. The tampering prohibition applies to heavy-duty engines as well as light-duty vehicles. The EPA's Memorandum 1A allows conversions to take place if there is a "reasonable basis" to believe the conversions do not worsen vehicle emissions.

Visit www.afdc.gov for more detailed information on these rulings.

Alternative Fueled Vehicles Made Available

Bus types are represented by three categories: School buses, Transit buses, and Intercity buses.



	LPG	CNG	LNG	EVC
School	84	148	0	2
Transit	101	973	343	15
Intercity	0	79	0	0

Source: Table 16

Within the transportation sector, focus is on Transit buses and their successful utilization of alternative fuels because of pollution, emissions, and clean air concerns as well as financial incentives.

Compressed Natural Gas remains a leader in fuel choice for Buses. Many transit agencies continue to order natural gas buses due to their successful utilization of established refueling infrastructures.

Transit buses are generally used in an intracity environment within a metropolitan area.

What's new in the world of AFVs…

Neighborhood Electric Vehicle— *On June 17, 1998, a major breakthrough occurred in the NEV market as the National Highway Traffic Safety Administration (NHTSA) created a new class of motor vehicle, the Low-Speed/Neighborhood Electric Vehicle (NEV). Currently, 37 states have passed legislation accepting the NHTSA's ruling on Low Speed Vehicles, allowing vehicles to be driven on roads that are posted at 35 miles per hour or less. The NEV has a maximum allowable speed of 25 mph. NHTSA requirements to qualify as a low-speed vehicle are that the vehicle must be equipped with automotive safety glass windshield, turn signals, mirrors, wiper blades, head and tail lights, and seat belts. NEVs are small, one- or two-passenger vehicles powered by rechargeable batteries and an electric motor. The vehicle is specially designed for low speed driving in and around city centers, planned communities, resorts, and even large industrial campuses.*

Sources: U.S. Department of Transportation (www.nhtsa.dot.gov) and www.gemcar.com

This year, data on Neighborhood Electric Vehicles were published under the "other onroad" category, along with motorcycles. Refer to Table 14 and Table 18.

EIA reports that over 4,000 NEVs were made available in calendar year 2000. For 2001, that number is estimated to increase to over 5,000.

Source:
The Form EIA-886 "Alternative Transportation Fuels and Alternative Fueled Vehicles Annual Survey 2000-2001"